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**Attorney Docket No.: US010635**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of:
**Mihaela Van Der Schaar et al.**

Serial No.: **09/998,361**

Filed: **November 29, 2001**

For: **Method and Apparatus for Decoding Spatially Scaled Fine Granular Encoded Video Signals**

Examiner: **Rao, Anand Shashikant**

Group Art Unit: **2613**

Attorney Docket No.: **US010635**

Date: **December 9, 2005**

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

## BRIEF OF APPELLANT

This is an appeal from the Office action mailed on June 9, 2005 finally rejecting claims 1-25 in the application. This Brief is accompanied by the requisite fees set forth in 37 CFR 1.17(c). Authorization is hereby given for any additional fees due and owing in connection with this Brief or for any overpayment credit to be charged to Deposit Account No. 50-2061.

## REAL PARTY IN INTEREST

Koninklijke Philips Electronics N.V., the assignee herein, is the real party in interest in the present appeal.

## RELATED APPEALS AND INTERFERENCES

Koninklijke Philips Electronics N.V., the real party in interest in the above-captioned application, has no related applications currently on appeal or involved in an interference.

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**Attorney Docket No.: US010635**

## STATUS OF CLAIMS

Claims 1-17 stand finally rejected and are being appealed herein. Claims 18-25 also stand finally rejected, however, claims 18-25 were canceled in the communication filed on December 29, 2004.

## STATUS OF AMENDMENTS

No amendments have been filed subsequent to the final rejection mailed on June 9, 2005.

## SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1:

Claim 1 is drawn to a method of decoding a video signal including a base layer stream and a plurality of enhancement layer streams.

The method comprises:

decoding **(reference character 120 in FIGS. 2 and 3)** the base layer stream **(reference character 116 in FIGS. 2 and 3)** to produce base layer video frames **(reference character 125 in FIGS. 2 and 3);**
**Specification: page 5, lines 9-12 of paragraph [0013]; page 5, lines 1-3 of paragraph [0014]; page 6, lines 1-4 of paragraph [0016]; pages 6-7, lines 2-4 of paragraph [0020]; and page 7, lines 3-8 of paragraph [0022]**

decoding **(reference character 150 in FIG. 2 and reference character 220 in FIG. 3)** a first one of said enhancement layer streams **(reference character 117 in FIGS. 2 and 3)**, to produce quality enhanced video frames **(reference characters 142 in FIGS 2 and 3);**
**Specification: page 5, lines 9-14 of paragraph [0013] referencing FIG. 2; page 5, lines 3-7 of paragraph [0015] referencing FIG. 2; and page 7, lines 3-8 of paragraph [0022] referencing FIG. 3**

combining **(reference character 170 in FIG. 2 and 3)** said base layer video frames **(reference character 125 in FIGS. 2 and 3)** and at least portions of said quality enhanced video frames **(reference character 142 in FIGS. 2 and 3)** to produce a first video frame output **(reference character 172 in FIGS. 2 and 3);**
**Specification: pages 6-7, lines 1-4 of paragraph [0020]**

upscaling **(reference character 129 in FIGS. 2 and 3)** said first video frame output **(reference character 128 in FIG. 2);**
**Specification: page 6, lines 1-2 of paragraph [0018]**

decoding **(reference character 150 in FIG. 2 and reference character 220 in FIG. 3)** a second one of said enhancement layer streams **(reference character 118 in FIG. 2 and reference character 215 in FIG. 3)** to produce spatially enhanced video frames **(reference characters 158 in FIGS. 2 and 3);**
**Specification: page 6, lines 2-3 of paragraph [0019]**

combining **(reference character 157 in FIGS. 2 and 3)** said spatially enhanced video frames **(reference character 158 in FIGS. 2 and 3)** and said upscaled first video frame **(reference character 128 in FIG. 2)** output to produce a second video frame output **(reference character 159 in FIGS. 2 and 3).**
**Specification: page 6, lines 1-2 and 4 of paragraph [0019]**

Claim 6:

Claim 6 is drawn to a memory medium for decoding a video signal including a base layer stream and a plurality of enhancement layer streams.
**Specification: page 9, lines 1-4 of paragraph [0027]**

The memory medium comprises:

code to decode **(reference character 120 in FIGS. 2 and 3)** said base layer stream **(reference character 116 in FIGS. 2 and 3)** to produce a base layer video frames **(reference character 125 in FIGS. 2 and 3);**
**Specification: page 5, lines 9-12 of paragraph [0013]; page 5, lines 1-3 of paragraph [0014]; page 6, lines 1-4 of paragraph [0016]; pages 6-7, lines 2-4 of paragraph [0020]; and page 7, lines 3-8 of paragraph [0022]**

code to decode **(reference character 150 in FIG. 2 and reference character 220 in FIG. 3)** a first one of said enhancement layer streams **(reference character 117 in FIGS. 2 and 3)** to produce quality enhanced video frames **(reference characters 142 in FIGS 2 and 3);**
**Specification: page 5, lines 9-14 of paragraph [0013] referencing FIG. 2; page 5, lines 3-7 of paragraph [0015] referencing FIG. 2; and page 7, lines 3-8 of paragraph [0022] referencing FIG. 3**

code to combine **(reference character 170 in FIG. 2 and 3)** said base layer video frames **(reference character 125 in FIGS. 2 and 3)** and at least portions of said quality enhanced video frames **(reference character 142 in FIGS. 2 and 3)** to produce a first video frame output **(reference character 172 in FIGS. 2 and 3);**
**Specification: pages 6-7, lines 1-4 of paragraph [0020]**

code to upscale **(reference character 129 in FIGS. 2 and 3)** said first video frame output **(reference character 128 in FIG. 2);**
**Specification: page 6, lines 1-2 of paragraph [0018]**

code to decode **(reference character 150 in FIG. 2 and reference character 220 in FIG. 3)** a second one of said enhancement layer streams **(reference character 118 in FIG. 2 and reference character 215 in FIG. 3)** to produce spatially enhanced video frames **(reference characters 158 in FIGS. 2 and 3);**
**Specification: page 6, lines 2-3 of paragraph [0019]**

code to combine **(reference character 157 in FIGS. 2 and 3)** said spatially enhanced video frames **(reference character 158 in FIGS. 2 and 3)** and said upscaled first video frame **(reference character 128 in FIG. 2)** output to produce a second video frame output **(reference character 159 in FIGS. 2 and 3).**
**Specification: page 6, lines 1-2 and 4 of paragraph [0019]**

Claim 11:

Claim 11 is drawn to a decoding apparatus **(reference character 100 in FIG. 2 and reference character 200 in FIG. 2)** for decoding a video signal including a base layer stream and a plurality of enhancement layer streams.
**Specification: page 4, lines 1-8 of paragraph [0013]**

The apparatus comprises:

means for decoding **(reference character 120 in FIGS. 2 and 3)** said base layer stream **(reference character 116 in FIGS. 2 and 3)** to produce base layer video frames **(reference character 125 in FIGS. 2 and 3);**
**Specification: page 5, lines 9-12 of paragraph [0013]; page 5, lines 1-3 of paragraph [0014]; page 6, lines 1-4 of paragraph [0016]; pages 6-7, lines 2-4 of paragraph [0020]; and page 7, lines 3-8 of paragraph [0022]**

means for decoding **(reference character 150 in FIG. 2 and reference character 220 in FIG. 3)** a first one of said enhancement layer streams **(reference character 117 in FIGS. 2 and 3)** to produce quality enhanced video frames **(reference characters 142 in FIGS 2 and 3);**
**Specification: page 5, lines 9-14 of paragraph [0013] referencing FIG. 2; page 5, lines 3-7 of paragraph [0015] referencing FIG. 2; and page 7, lines 3-8 of paragraph [0022] referencing FIG. 3**

means for combining **(reference character 170 in FIG. 2 and 3)** said base layer video frames **(reference character 125 in FIGS. 2 and 3)** and at least portions of said quality

enhanced video frames **(reference character 142 in FIGS. 2 and 3)** to produce a first video frame output **(reference character 172 in FIGS. 2 and 3)**;
**Specification: pages 6-7, lines 1-4 of paragraph [0020]**

means for upscaling **(reference character 129 in FIGS. 2 and 3)** said first video frame output **(reference character 128 in FIG. 2)**;
**Specification: page 6, lines 1-2 of paragraph [0018]**

means for decoding **(reference character 150 in FIG. 2 and reference character 220 in FIG. 3)** a second one of said enhancement layer streams **(reference character 118 in FIG. 2 and reference character 215 in FIG. 3)** to produce spatially enhanced video frames **(reference characters 158 in FIGS. 2 and 3)**;
**Specification: page 6, lines 2-3 of paragraph [0019]**

means for combining **(reference character 157 in FIGS. 2 and 3)** said spatially enhanced video frames **(reference character 158 in FIGS. 2 and 3)** and said upscaled first video frame **(reference character 128 in FIG. 2)** output to produce a second video frame output **(reference character 159 in FIGS. 2 and 3)**.
**Specification: page 6, lines 1-2 and 4 of paragraph [0019]**

## GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

There are two grounds of rejection presented for review:

I. Whether claims 1, 2, 6, 7, 11, and 12 are anticipated under 35 U.S.C. 102(e) by U.S. Patent 6,603,883 to Hamanaka.

II. Whether claims 3-5, 7-9, and 13-17 are unpatentable under 35 U.S.C. 103(a) over Hamanaka.

**Attorney Docket No.: US010635**

## ARGUMENT

### I. REJECTION UNDER 35 U.S.C. 102(b)

The first ground of rejection presented for review is whether claims 1, 2, 6, 7, 11, and 12 are anticipated under 35 U.S.C. 102(e) by U.S. Patent 6,603,883 to Hamanaka.

It is respectfully submitted that Hamanaka does not anticipate the subject matter of claims 1, 2, 6-7, 11, and 12 because Hamanaka does not expressly or inherently describe each element of each the claims. Anticipation of a claim requires that the cited prior art reference must disclose every element of the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed.Cir. 1987).

Specifically, Hamanaka does not expressly or inherently describe a method, memory medium, or apparatus for decoding a video signal including a base layer stream and a plurality of enhancement layer streams that comprises among other elements "combining said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output...upscaling said said first video frame output...combining said spatially enhanced video frames and said upscaled first video frame output to produce a second video frame output..." as required in the claims. Since Hamanaka does not described these element 5, claims 1, 2, 6-7, 11, and 12 are not anticipated by Hamanaka.

In maintaining this rejection, the examiner relies on portions of Hamanaka which relate to Hamanaka's encoding device 100 of FIG. 4. Specifically, the examiner cites column 6, lines 55-67; column 7, lines 1-7; and column 8, lines 20-25, 21-31 and 32-43 in support of this rejection. Each one of these portions of Hamanaka relates to an encoding device and encoding functions. None of the portions of Hamanaka relied on by the examiner relate to a method, memory medium, or apparatus for decoding a video signal including a base layer stream and a plurality of enhancement layer streams.

In addition to the erroneous reliance on Hamanaka's encodin4g device, that examiner is wrong regarding the interpretation of the claims. For example, in responding to the applicant's arguments, the examiner states that "'...combining the base layer video frames and at least

portions of said quality enhanced video frame output...' " (the examiner misquotes this limitation) "is met by Hamanaka's teaching of combining the decoded common base layer and the decoded temporal enhancement layer (Hamanaka: column 8, lines 20-25)... . " Notwithstanding the incorrect quotation of appellants' claim, the claims call for "quality enhanced video frames, not temporal enhancement layer frames, as stated by the examiner. It is also noted that column 8, lines 20-25, of Hamanaka does not appear to support the examiner's interpretation of same, as it describes:

> "In the second data generation circuit 106 (refer to FIG. 7), the first selector 401 switches its output over to the first difference data generation circuit 403, in accordance with the encoding control signal from the control circuit 103, to output the YCbCr data received from the second frame memory 104."

In view of these deficiencies, Hamanaka does not expressly or inherently describe a method, memory medium, or apparatus for decoding a video signal including a base layer stream and a plurality of enhancement layer streams that comprises among other elements "combining said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output...upscaling said said first video frame output...combining said spatially enhanced video frames and said upscaled first video frame output to produce a second video frame output..." as required in claims 1, 2, 6, 7, 11, and 12. In addition, the claims, particularly, dependent claims 2, 6, 7, 11, and 12, recite other features not described by Hamanaka.

In view of the foregoing, it is respectfully submitted that claims 1, 2, 6, 7, 11 and 12 are not anticipated under 35 U.S.C. 102(e) by Hamanaka.

## II. REJECTION UNDER 35 U.S.C. 103(a)

The second ground of rejection presented for review is whether claims 3-5, 7-9, and 13-17 are unpatentable under 35 U.S.C. 103(a) over Hamanaka.

A claimed invention is *prima facie* obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine teachings. *See In re Jones,* 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); *In re Fine,* 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Second, there must be a reasonable expectation of

success. *See In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Third, the prior art reference or combined references must teach or suggest all the claim limitations. *See In re Royka*, 490 F. 2d 981, 180 USPQ 580 (CCPA 1974).

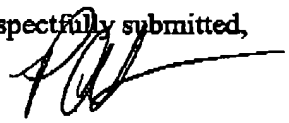
The above discussion regarding the deficiencies of Hamanaka as applied to claims 1, 2, 6, 7, 11 and 12, are incorporated herein by reference. Since claims 3-5, 7-9, and 13-17 depend respectively from claims 1, 6, and 11, they also contain the earlier discussed limitations not described by Hamanaka. For at least these reasons, Hamanaka does not teach or suggest all the limitations of claim 3-5, 7-9, and 13-17. Hence, it is respectfully submitted that the examiner has failed to establish a *prima facie* case of obviousness of the invention of claims 3-5, 7-9, and 13-17.

In view of the foregoing, it is respectfully submitted that claims 3-5, 7-9, and 13-17 are patentable under 35 U.S.C. §103(a) over Hamanaka.

## CONCLUSION

It has been shown that the claimed invention distinguishes over the express and implied teachings of the prior art cited of record in the application. Hence, appellant respectfully requests that the Board reverse the examiner and direct that the application proceed to issue.

Respectfully submitted,



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**Attorney Docket No.: US010635**

## CLAIMS APPENDIX

1. (Previously Presented) A method of decoding a video signal including a base layer stream and a plurality of enhancement layer streams, said method comprising the steps of:

decoding said base layer stream to produce base layer video frames;

decoding a first one of said enhancement layer streams to produce quality enhanced video frames;

combining said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output;

upscaling said said first video frame output;

decoding a second one of said enhancement layer streams to produce spatially enhanced video frames;

combining said spatially enhanced video frames and said upscaled first video frame output to produce a second video frame output.

2. (Previously Presented) The method as recited in claim 1 further comprising the steps of :

decoding a third one of said enhancement layer streams to produce temporally enhanced video frames; and

combing said temporally enhanced video frames and said spatially enhanced video frames to produce a third video frame output.

3. (Previously Presented) The method as recited in claim 1 further comprising the steps of:

decoding said base layer stream to produce motion compensated video frames; and

combining said base layer video frames with said motion compensated video frames.

4. (Previously Presented) The method as recited in claim 2 further comprising the steps of:

decoding said third one of said enhancement layer streams to produce motion compensated temporally enhanced video frames; and

combining said temporally enhanced video frames with said motion compensated temporally enhanced video frames to produce a fourth video frame output.

5. (Previously Presented) The method as recited in claim 4 further comprising the step of multiplexing selected ones of said second, third and fourth video frame outputs to produce a combined video frame output.

6. (Previously Presented) A memory medium for decoding a video signal including a base layer stream and a plurality of enhancement layer streams, comprising:

code to decode said base layer stream to produce a base layer video frames;

code to decode first one of said enhancement layer streams to produce quality enhanced video frames;

code to combine said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output;

code to upscale said said first video frame output;

code to decode a second one of said enhancement layer streams to produce spatially enhanced video frames;

code to combine said spatially enhanced video frames and said upscaled first video frame output to produce a second video frame output.

7. (Previously Presented) The memory medium as recited in claim 6 further including:

code to decode a third one of said enhancement layer streams to produce temporally enhanced video frames;

code to combine said temporally enhanced video frames and said spatially enhanced video frames to produce a third video frame output.

8. (Previously Presented) The memory medium as recited in claim 6 further including:

code for decoding said base layer stream to produce motion compensated video frames; and

code for combining said base layer video frames with said motion compensated video frames.

9. (Previously Presented) The memory medium as recited in claim 7 further including:

code for decoding said third one of said enhancement layer streams to produce motion compensated temporally enhanced video frames; and

code for combining said temporally enhanced video frames with said motion compensated temporally enhanced video frames to produce a fourth video frame output.

10. (Previously Presented) The memory medium as recited in claim 9 further including code for multiplexing selected ones of said second, third and fourth video frame outputs to produce a combined output.

11. (Previously Presented) A decoding apparatus for decoding a video signal including a base layer stream and a plurality of enhancement layer streams, said apparatus comprising:

means for decoding said base layer stream to produce base layer video frames;

means for decoding a first one of said enhancement layer streams to produce quality enhanced video frames;

means for combining said base layer video frames and at least portions of said quality enhanced video frames to produce a first video frame output;

means for upscaling said first video frame output;

means for decoding a second one of said enhancement layer streams to produce spatially enhanced video frames;

means for combining said spatially enhanced video frames and said upscaled first video frame output to produce a second video frame output.

12. (Previously Presented) The apparatus as recited in claim 11 further comprising:

means for decoding a third one of said enhancement layer streams to produce temporally enhanced video frames; and

means for combining said temporally enhanced video frames and said spatially enhanced video frames to produce a third video frame output.

13. (Previously Presented) The apparatus as recited in claim 11 further comprising:

means for decoding said base layer stream to produce motion compensated video frames; and

means for combining said base layer video frames with said motion compensated video frames.

14. (Previously Presented) The apparatus as recited in claim 12 further comprising:

means for decoding said third one of said enhancement layer streams to produce motion compensated temporally enhanced video frames; and

means for combining said temporally enhanced video frames with said motion compensated temporally enhanced video frames to produce a fourth video frame output.

15. (Previously Presented) The apparatus as recited in claim 14 further comprising means for multiplexing selected ones of said second, third, and fourth video frame outputs to produce a combined video frame output.

16. (Previously Presented) The apparatus as recited in claim 11 further comprising means for demultiplexing said plurality of enhancement layer streams when said enhancement layer streams are multiplexed transmitted.

17. (Previously Presented) The apparatus as recited in claim 16 further comprising means for demultiplexing said base layer stream when said base layer steam is multiplexed transmitted.

18-25 (Canceled)

**Attorney Docket No.: US010635**

## EVIDENCE APPENDIX

No evidence has been submitted pursuant to 37 C.F.R. 1.130, 1.131, or 1.132.

**Attorney Docket No.: US010635**

## RELATED PROCEEDINGS APPENDIX

There are no decisions rendered by a court or by the Board of Patent Appeals and Interferences to append hereto.